Copperman®

Bactericide & Fungicide

Reg. No. L 10962, N-AR 2198 Act No. 36 of 1947 / Reg. Nr. L 10962, N-AR 2198 Wet Nr. 36 van 1947

READ THE LABEL BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS

Group/Groep	M01	Fungicide/Swamdoder

A COPPER-CONTAINING SUSPENSION CONCENTRATE FUNGICIDE AND BACTERICIDE FOR THE CONTROL OF DISEASES ON CROPS AS INDICATED.

'N KOPERBEVATTENDE SUSPENSIE KONSENTRAAT SWAMDODER EN BAKTERIOSIED VIR DIE BEHEER VAN SIEKTES OP GEWASSE SOOS AANGEDUI.

Danger



Hazard Statements:
- Harmful if swallowed.
- May be harmful in contact with skin.
- Causes serious eye damage.
- Harmful if inhaled.
- Very toxic to aquatic life.
- Toxic to aquatic life with long lasting effects.

Precautionary Statements:
- Keep only in original container.
- Wash hands thoroughly after handling. Do not touch your eyes.
- Wear protective gloves, protective clothing, eye protection and face protection.

Active Ingredient / Aktiewe Bestanddeel:
Copper hydroxide.....180 g/L.....Koperhidroksied
S.G (at 20°C): 1.17

UN 3082

Net Volume:
20 L

MBFi
Leaders in Science, Partners in Growth.

Registered, Marketed and Distributed by / Geregistreer, Bemark en Versprei deur:
MBFi (PTY) LTD • Reg No.: 2015/165672/07 • No. 144 Avenue 2, Modder East Orchards, Delmas, 2210
Tel: +27 (0) 82 738 0080 • Email: orders@mbfi.co.za • Web: www.mbfi.co.za

IN CASE OF POISONING, CALL THE FOLLOWING EMERGENCY NUMBER / IN GEVAL VAN VERGIFTIGING, SKAKEL DIE VOLGENDE NOODNOMMER 082 446 8946 / 0861 555 777

Copperman® is a registered trademark of MBFi (PTY) LTD / Copperman® is 'n geregistreerde handelsmerk van MBFi (EDMS) BPK.

ZAR 003

WARNINGS:

- **GHS Hazard Statements:**

Pictograms and Signal word	Hazard Statements	
Danger 	H302	Harmful if swallowed.
	H313	May be harmful in contact with skin.
	H318	Causes serious eye damage.
	H332	Harmful if inhaled.
	H400	Very toxic to aquatic life.
	H411	Toxic to aquatic life with long lasting effects.

Name	CAS No.	Weight (%)
Copper hydroxide	20427-59-2	15.39

Withholding periods - Minimum time between last application and harvest:
Apple, Avocado, Citrus, Coffee, Mango, Onion, Peach, Potato.....14 days
Grapes (Table).....4-6 weeks
Grapes (Wine).....21 days

Re-entry interval: Do not enter the treated area until the spray deposit has dried unless wearing protective clothing.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions; quality of dilution water; compatibility with other substances not indicated on the label and the occurrence of resistance of the pest against the remedy concerned as well as by the method, time and accuracy of application. Furthermore, the registration holder, does not accept responsibility for damage to crops, vegetation, the environment, or harm to man or animal, or for lack of performance of the remedy concerned, due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS:
•GHS Precautionary Statements:

P203	Obtain, read and follow all safety instructions before use.
P234	Keep only in original container.
P260	Do not breathe mist and spray.
P264 P265	Wash hands thoroughly after handling. Do not touch eyes.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P301 P317	IF SWALLOWED: Get medical help.
P302 P350	IF ON SKIN: Gently wash with plenty of soap and water.
P305 P351 P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P318	If exposed or concerned, get medical advice.
P319	Get medical help if you feel unwell.
P337 P317	If eye irritation persists: Get medical help.
P405	Store locked up.

- Store in the original labelled container only.
- Wear gloves and a face shield when handling.
- Wash hands and face before eating, drinking, smoking or using the toilet.
- Avoid spray drift onto adjacent crops, grazing, rivers and dams.
- Clean applicators before using for other remedies and ensure disposal of wash water does not contaminate crops, grazing, rivers, dams and water sources.
- Prevent contamination of food, feedstuffs, drinking water and eating utensils during handling, storage or disposal.
- Triple rinse the empty container: Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter, rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

Symptoms of Human Poisoning:
Ingestion can cause diarrhoea and stomach pain. Certain individuals may be sensitive to copper. If product gets into the eyes, it causes substantial but temporary eye irritation. Inhalation may cause respiratory tract irritation.

RESISTANCE WARNING:
For resistance management, Copperman® is a group code M01 fungicide. Any fungus population may contain individuals naturally resistant to Copperman® and other group code M01 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly. These resistant fungi may not be controlled by Copperman® or any other group code M01 fungicides.

To Delay Fungicide Resistance:
• Avoid exclusive repeated use of fungicides from the same fungicide group code.
• Alternate or tank mix with registered products from different fungicide group codes.
• Integrate other control methods (chemical, cultural, biological) into disease control programs.

For specific information on resistance management contact the registration holder of this product.

DIRECTIONS FOR USE:
• SHAKE BEFORE USING.
• Use only as indicated on this label.

Compatibility: Do not apply Copperman® in combination with any acidifying products or chelates with or within 30 days of a Copperman® application.

Environmental Conditions: Do not apply Copperman® under adverse weather conditions causing stress to the crop, such as high or low temperatures, high or low humidity, rain or frost. Do not apply when the fruit is still wet as a result of rain or dew. Do not apply during periods of water stress. Avoid application during night-time, as it may cause stippling of fruit.

Important: It is essential that Copperman® be kept agitated throughout the entire mixing and spraying operation. Copperman® is a preventive spray and application must be carried out before or just as the first signs of the disease are noticed.

Citrus: Successive Copperman® applications, adverse environmental conditions, late applications (March-April) or acidifying products can cause stippling of fruit. To avoid stipple formation, replace every second application with Mancozeb. Do not apply Copperman® with any buffers or acidifiers, or any other adjuvants before consulting a qualified agronomist.

Crop and Disease	Dosage/100 L Water	Remarks
Apple: Scab *Venturia inaequalis*	170 ml	Apply 2 applications with a 7 day interval. Commence application at green tip.
Avocado: Fruit spot *Pseudocercospora purpurea*	350 ml	Start applications early in November and repeat every 4 weeks. Apply 3-4 full cover applications during the season. Will also control Anthracnose if present at time of application.
Citrus: Alternaria spot *Alternaria alternata pv. citri* Black spot *Guignardia citricarpa*	250 ml + 100 g Mancozeb 800 g/kg WP 350 ml	Apply as a high-volume full cover spray. Begin application at first flush (± mid-September) and repeat every 28 days until harvest. Start applications before mid-October. Apply 3 high volume sprays at 30 day intervals during the susceptible period from October to end December. During a high rainfall season, a 4th application may be necessary.
Coffee: Rust *Hemileia vastatrix*	550 ml	Apply as a full cover spray, commencing before rust symptoms appear. Apply 4-5 sprays at 4 week intervals. Apply at least 1000 L/ha spray mixture.
Mango: Bacterial spot *Xanthomonas campestris*	350 ml	Apply at 2-4 week intervals from just after fruit set until harvest. The product is especially suited for application as the last two sprays at the end of a spray program.

Crop and Disease	Dosage/100 L Water	Remarks
Onion: Downy mildew *Peronospora destructor*	350 ml	Apply 3-4 applications with 10-14 day intervals. Apply in 300-500 L/ha water, depending on plant size. Start application when the disease is first noticed. If weather conditions favour disease development (temperatures of 15-28°C and high humidity) use the shorter interval.
Peach: Leaf curl *Taphrina deformans*	450 ml + 140 g Thiram (Tank mix)	Apply as a full cover spray at 60% leaf drop and at bud swell. Add Twister at 50 ml/100 L water.
Potato: Early blight *Alternaria solani* Late blight *Phytophthora infestans*	350 ml 350 ml + 200 g Mancozeb 800 g/kg WP (Tank mix)	Commence application before or when the disease is first noticed. Apply every 7-10 days depending on if weather conditions are favourable for the development of the disease. The volume of the spray mixture to be applied per hectare depends on the plant size and density. Apply 500-1500 L/ha spray mixture. Ensure thorough coverage of both upper and lower leaf surfaces. Repeat application after more than 13 mm of rain or overhead irrigation. Start preventive application before first signs of the disease, depending on conditions favourable for the development of late blight infections. Apply at 7-10 day intervals. If late blight is present in a field, spray intervals should be shortened to 5 days. **Low volume application:** 200-300 L/ha water. **High volume application:** 1500 L/ha water. Ensure full coverage of both upper and lower leaf surfaces. Repeat application after more than 13 mm rain or overhead irrigation.
Table and Wine Grapes: Downy mildew *Plasmopara viticola*	350 ml	Apply when shoots are approximately 10 cm long and repeat every 10-14 days depending on weather conditions. Ensure thorough coverage of the vines. Increase the spray volume progressively from 500-1500 L/ha, depending on the vine growth. **NB:** Do not apply after pea berry stage (4-6 weeks before harvest).

Twister (L9666 – 700 g/L Methylated vegetable oil) is a registered trademark of MBFi (PTY) LTD and registered under Act No. 36 of 1947.

Approved by ECOCERT INPUTS

Product suitable for use in Organic Farming in accordance with EU Regulation No 2018/848 and 2021/1165 *and* NOP Regulation *and* JAS Regulation
Controlled by ECOCERT SAS

WAARSKUWINGS:

- **GHS-Gevaarstellings:**

Piktogramme en Seinwoord	Gevaarstellings	
Gevaar 	H302	Skadelik as dit ingesluk word.
	H313	Kan skadelik wees in kontak met die vel.
	H318	Veroorsaak ernstige oogskade.
	H332	Skadelik as dit ingeasem word.
	H400	Baie giftig vir waterlewe.
	H411	Giftig vir waterlewe met langdurige effekte.

Name	CAS No.	Weight (%)
Koperhidroksied	20427-59-2	15.39

Weerhoudingsperiode - Minimum tyd tussen laaste aanwending en oestyd:
Aartappel, Appel, Avokado, Koffie, Mango, Perske, Sitrus, Ui .....14 dae
Druiwe (Tafel).....4-6 weke
Druiwe (Wyn).....21 dae

Wagperiode: Moenie behandelde area binnegaan totdat spuitstof droog is nie behalwe as beskermende klere gedra word.

Alhoewel hierdie middel aan uitgebreide toetse onder 'n verskeidenheid van toestande onderwerp is, kan die registrasiehouer nie waarborg dat dit effektief sal wees onder alle omstandighede nie, omdat die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale klimaats- en bergingstoestande, kwaliteit van verdunningswater, verenigbaarheid met ander stowwe nie aangedui op die etiket nie en die weerstand van die plaag teen die betrokke middel asook die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer ook nie verantwoordelikheid vir enige skade aan gewasse, plantegroei, die omgewing of die nadelige uitwerking op mens of dier nie, of vir die onvermoë van die betrokke middel om te presteer nie, as gevolg van die gebruiker se versuim om die etiket se aanwysings te volg of vir die voorkoms van toestande wat nie voorsien kon word in terme van die registrasie nie. Raadpleeg die verskaffer indien daar enige onsekerheid is.

VOORSORGMAATREËLS:

• GHS-Voorsorgverklarings:

P203	Verkry, lees en volg alle veiligheidsinstruksies voor gebruik.
P234	Hou slegs in oorspronklike verpakking.
P260	Vermy inasemhaling van mis en sproei.
P264 P265	Was hande deeglik na hantering. Moenie aan oë raak nie.
P270	Moenie eet, drink of rook wanneer hierdie produk gebruik nie word nie.
P273	Vermy vrylating aan die omgewing.
P280	Dra beskermende handskoene, beskermende klere en oogbeskerming.
P301 P317	INDIEN INGESLUK: Kry mediese hulp.
P302 P350	INDIEN OP DIE VEL: Was liggies met baie seep en water.
P305 P351 P338	AS IN DIE OË: Spoel versigtig met water vir ‘n paar minute. Verwyder kontaklense indien teenwoordig en maklik om te doen. Hou aan uitspoel.
P318	As u blootgestel of bekommerd is, kry mediese advies.
P319	Kry mediese hulp as jy ongesteld voel.
P337 P317	As oogirritasie voortduur: Kry mediese hulp.
P405	Stoor toegesluit.

- Stoor slegs in houer met oorspronklike etiket.
- Dra handskoene en ‘n gesigmasker gedurende hantering.
- Was hande en gesig voordat daar geëet, gedrink, gerook of die toilet besoek word.
- Verseker dat sproei nie wegdryf na aangrensende gewasse, weiding, riviere of damme nie.
- Was toerusting voordat dit gebruik word vir ander middels en verseker dat die waswater wat weggegooi word nie gewasse, weiding, riviere, damme of waterbronne besoedel nie.
- Voorkom die besoedeling van kos, voer, drinkwater en eetgerei tydens hantering, stoor en vernietiging.
- Spoel die leë houer drievoudig: Keer die leë houer om oor die spuit- of mengtenk en dreineer vir ten minste 30 sekondes nadat die vloei vertraag het tot drup. Spoel daarna die leë houer drie keer agtereenvolgens met ‘n kwart van die houervolume vars water en dek die spoel in die spuit- of mengtenk. Steek die driedubbelspoelhouer deur en gooi dit weg via ‘n goedgekeurde versamelaar of herwinner (www.croplife.co.za). Moenie die houer begrawe, verbrand of skenk aan enige ander partye wat dit as ‘n houer vir kos of drank mag gebruik nie.

Simptome van Menslike Vergiftiging:

Mondelingse inname kan diarree en maagpyn veroorsaak. Sekere individue kan sensitief wees vir koper. As die produk in die oë kom, veroorsaak dit aansienlike maar tydelike oogirritasie. Inaseming kan irritasie van die lugweë veroorsaak.

WEERSTANDSWAARSKUWING:

Vir weerstandsbestuur, Copperman® is ‘n M01 groepkode swamdoder. Enige swampopulasie kan individue insluit wat ‘n natuurlike weerstand teen Copperman® en ander M01 groepkode swamdoders. Die weerstandige individue kan uiteindelik die swambevolking oorheers indien hierdie swamdoders herhaaldelik gebruik word. Hierdie weerstandige swamme mag moontelik nie beheer word deur Copperman® of enige ander M01 groepkode swamdoder nie.

Om Weerstand Teen Swamdoders te Vertraag:
• Vermy die eksklusiewe herhaaldelike gebruik van swamdoders uit dieselfde swamdodergroepkode.
• Wissel of gebruik 'n tenkmengsel saam met geregistreerde produkte van verskillende swamdodergroepkodes af.
• Integreer ander beheermaatreëls (chemies, kultureel, biologies) in siektebeheer programme.

Vir spesifieke inligting oor weerstandsbestuur kontak die registrasiehouer van hierdie produk.

GEBRUIKSAANWYSINGS:
• SKUD VOOR GEBRUIK.
• Gebruik slegs soos aangedui op hierdie etiket.

Verenigbaarheid: Moenie Copperman® in kombinasie met enige versuurende produkte of cheleerders met of binne 30 dae van Copperman® toedien nie.

Omgewingsomstandighede: Moet nie Copperman® tydens ongunstige weer toestande wat spanning op die gewas veroorsaak toedien nie. Ongunstige weertoestande sluit hoë of lae temperature, hoë of lae humiditeit, reën en ryp in. Moenie toedien wanneer die vrug nog nat is as gevolg van reën of dou nie. Moenie toedien tydens periodes van waterstres nie. Vermy toediening gedurende nagtyd, want dit mag vrugstippeling veroorsaak.

Belangrik: Dit is noodsaaklik dat Copperman® deur die hele siklus van meng en bespuiting geroer moet word. Copperman® is 'n voorkomende bespuiting en toediening moet uitgevoer word voor of net na die eerste tekens van die siekte opgemerk word.

Sitrus: Opeenvolgende Copperman®-toedienings, ongunstige omgewingstoestande, laat toediening (Maart-April) of versuurende produkte kan vrugstippeling veroorsaak. Om stippelvorming te vermy, vervang elke tweede toediening met Mancozeb. Moenie Copperman® saam met enige buffers, versuurers of enige ander hulpmiddels toedien voor 'n gekwalifiseerde landboukundige of die verksaffer geraadpleeg is nie.

Gewas en Siekte	Dosage/100 L Water	Opmerkings
Aartappel: Laatroes *Phytophthora infestans*	350 ml + 200 g Mancozeb 800 g/kg WP (Tenk mengsel)	Afhangend van plantgrootte, dien toe teen 500-1500 L/ha spuitmengsel. Verseker deeglike bedekking van beide boonste en onderste blaaroppervlaktes. Herhaal toediening na meer as 13 mm reën of oorhoofse besproeiing. Begin voorkomende toediening voor die eerste tekens van die siekte, afhangende van toestande wat gunstig is vir die ontwikkeling van laatroesinfeksies. Dien toe met tussenposes van 7-10 dae. As laatroes teenwoordig is in 'n land, moet spuitintervalle verkort word na 5 dae. **Lae volume toediening:** 200-300 L/ha water. **Hoë volume toediening:** 1500 L/ha water. Verseker volle bedekking van beide boonste en onderste blaaroppervlaktes. Herhaal toediening na meer as 13 mm reën of oorhoofse besproeiing.
Vroeë roes *Alternaria solani*	350 ml	Begin toediening voor of net wanneer eerste simptome opgemerk word. Dien elke 7-10 dae toe, afhangende van die weerstoestande wat gunstig is vir die ontwikkeling van die siekte.
Appel: Skurfsiekte *Venturia inaequalis*	170 ml	Dien 2 toedienings toe met 'n 7 dae interval. Spuit by groenpunt stadium.

Gewas en Siekte	Dosage/100 L Water	Opmerkings
Avokado: Vrugte vlek *Pseudocercospora purpurea*	350 ml	Begin toediening vroeg in November en herhaal elke 4 weke. Dien 3-4 volle dekbespuitings toe gedurende die seisoen. Sal Antraknose ook beheer as dit teenwoordig is tydens die tyd van toediening.
Koffie: Roes *Hemileia vastatrix*	550 ml	Dien as 'n volledige dekbespuiting toe, wat begin voordat roes verskyn. Dien 4-5 bespuitings toe met 4 weke intervalle. Dien toe met ten minste 1000 L/ha.
Mango: Bakteriese vlek *Xanthomonas campestris*	350 ml	Dien toe met tussenposes van 2-4 weke vanaf net na vrug tot oes. Die produk is veral geskik vir toediening as die laaste twee bespuitings aan die einde van 'n spuitprogram.
Perske: Blaarkrul *Taphrina deformans*	450 ml + 140 g Thiram (Tenk mengsel)	Dien toe as 'n volle dekbespuiting teen 60% blaarval en by knoppie swel. Voeg Twister by teen 50 ml/100 L water.
Sitrus: Alternaria spot *Alternaria alternata pv. citri* Swartvlek *Guignardia citricarpa*	250 ml + 100 g Mancozeb 800 g/kg WP 350 ml	Dien toe as 'n hoë volume dekbespuiting. Begin bespuiting teen "first flush"(± middel September) en herhaal elke 28 dae tot oes. Begin Copperman® toedienings voor middel Oktober. Dien 3 hoë volume bespuitings toe met 30 dae tussenposes gedurende die vatbare tydperk vanaf Oktober tot einde Desember. Tydens 'n hoë reënvalseisoen kan 'n 4de toediening nodig wees.
Tafel en Wyndruiwe: Donsskimmel *Plasmopara viticola*	350 ml	Begin bespuiting wanneer lote ongeveer 10 cm lank is en herhaal elke 10-14 dae, afhangende van die weerstoestande. Verseker deeglike bedekking van die wingerde. Verhoog die spuitvolume progressief vanaf 500-1500 L/ha, afhangende van die wingerdgroei. **LW:** Moet nie na ertjiegrootte stadium (4-6 weke voor oes) toedien nie.
Uie: Donsskimmel *Peronospora destructor*	350 ml	Dien 3-4 toedienings toe met intervalle van 10-14 dae. Dien toe met 300-500 L water/ha, afhangende van plantgrootte. Begin sodra die siekte opgemerk word, of wanneer die weerstoestande gunstig is vir die ontwikkeling van die siekte. Verseker volledige spuitbedekking.

Twister (L9666 – 700 g/L Gemetileerde esters van plantaardige olies) is 'n geregistreerde handelsmerk van MBFi (EDMS) BPK en geregistreer onder Wet Nr. 36 van 1947.

Approved by ECOCERT INPUTS

Produk goedgekeur vir die gebruik in Organiese Boerdery volgens EU Regulasie Nr 2018/848
en 2021/1165 *en* NOP Regulasie *en* JAS Regulasie
Gekontrolleer deur ECOCERT SAS